

DOCKET NO.: MSFT-2872/306077.02
Application No.: 10/788,813
Office Action Dated: January 8, 2008

PATENT
REPLY FILED UNDER EXPEDITED
PROCEDURE PURSUANT TO
37 CFR § 1.116

REMARKS

Claims 1 through 42 are pending in the present application. Applicant proposes amending claims 1, 5, 6, 8-10, 13, 17, 18, 20-22, 24-26, 28-34, 36, 38 and 39, and canceling 42.

In the Office Action issued on January 8, 2008 (the “Office Action”), claims 32 and 33 were objected to for various informalities. Claims 1 through 42 were rejected under one or more of 35 U.S.C. §§ 112 and 103.

Reconsideration of the present application is respectfully requested in view of the above amendments and following remarks.

Telephone Interview

The undersigned wishes to thank Examiner Kumar for participating in the telephonic interview of February 19, 2007.

During that interview, an amendment to claim 1 consistent with the amendment proposed herein was discussed. The Applicant raised distinctions between the claim language and the cited references. The remarks submitted herein are consistent with the discussion during the interview.

The Examiner agreed to give further consideration to the pending claims upon submission of a reply.

Claim Objections

Claims 32 and 33 stand objected to “for ending the claim with ‘of the claim #.’” Applicant proposes amending claims 32 and 33 in order to correct these informalities.

Withdrawal of the objections is respectfully requested.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claim 5 was rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter. In particular, claim 5 recites the limitation “a first region” and is dependent on claim 1, which

also recites “a first region.” Applicant proposes amending claim 5 in order to correct any alleged indefiniteness.

Withdrawal of the rejection is respectfully requested.

Rejection Under 35 U.S.C. § 103(a)

Claims 1- 42 were rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over US 2002/0021289 A1 (hereinafter “Combs”) in view of US 6,359,635 B1 (hereinafter “Perttunen”) and further in view of US 2002/0015024 A1 (hereinafter “Westerman”).

Applicant respectfully requests reconsideration.

Claim 1 recites:

A user interface control, comprising:
a touchpad control having a touch-sensitive surface comprising the shape of an arc, the arc divided into a first region and a second region by a dividing boundary, the first region associated with a first function having a plurality of different degrees of said first function each degree of the first function associated with a corresponding relative distance within the first region from the dividing boundary,
wherein the touchpad control is configured to detect a touch within the first region and to select the first function and an associated degree of the first function corresponding to the relative distance of the touch from the dividing boundary within the first region.

In order for a reference or set of references to render the claim obvious, the references must teach the entirety of the recited claim including the above-emphasized language. Applicants respectfully submit that the cited references do not teach the emphasized language and cannot possibly teach the recited combination.

Combs discloses a computing system with a touchpad 19 and two joysticks 20(a), 20(b). The touchpad control 19 includes the touchpad surface 110 and the touchpad sensor 122, which is configured in such a manner that pressure on or near the pad surface 100 by a finger or stylus 21 allows the sensor 122 to detect the location of the touch. (See ¶ [0089] and FIG. 2F). In contrast to claim 1, the touchpad surface of Combs does **not** “comprise the shape of an arc.” Rather, as clearly shown in Fig. 2A, the touchpad surface 110 of the touchpad 19 is substantially in the shape of a rectangle - not an “arc.” While the physical

enclosure 100 of the touchpad 19 and joysticks 20a, 20b may have curved edges, the touchpad surface 110 itself is substantially rectangular, and not “in the shape of an arc” as recited in claim 1.

Furthermore, the touchpad surface 110 in Combs is not “**divided into a first region and a second region by a dividing boundary, the first region associated with a first function having a plurality of different degrees of said first function each degree of the first function associated with a corresponding relative distance from the dividing boundary**”. In Combs, the touchpad surface includes a default template graphical design inscribed on the touchpad surface 110. (See Fig. 2A) The template graphical design includes images that **each correspond to a different function**. For example, the template graphical design includes images of buttons entitled “enter,” “exit,” “pause,” “previous,” “next,” and four different arrow keys indicating up, down, right, or left. Each of these images corresponds to a **different function** with a corresponding **different functional purpose**. None of the functions associated with the graphical images can be considered to be **different degrees of a single function**. The degree of function performed in Combs does not change depending on where on a given button the user presses. For example, the function corresponding to the “enter” image performs only one level of function (*i.e.*, “entering”), and the degree of the “enter” function performed does not change depending on where on the “enter” button that a user presses. Combs simply does not teach or suggest **different degrees** of any given function depending upon a relative distance from the dividing boundary of the arc (or relative to any other location on the touchpad surface 110).

Furthermore, Combs also does not teach or suggest a “wherein the touchpad control is configured to detect a touch within the first region and to **select the first function and an associated degree of the first function corresponding to the relative distance of the touch from the dividing boundary within the first region**.” Again, as discussed above, each of the images on the touchpad surface 110 in Combs corresponds to a **different function** with a corresponding different functional purpose, and **not** to different respective **degrees** of any **single function**. For example, the **degree** of function performed in Combs does not change depending on **where** on the “enter” button a user presses. Combs simply does not teach or suggest different degrees of functionality depending upon a relative location of the touch.

Perttunen does not address the deficiencies of Combs. Perttunen discloses a method for visibly representing information with a plurality of regions and for providing an input interface to allow a user-initiated selection of a portion of this information. (Perttunen, col. 2, lines 23-28). Perttunen shows in FIG. 9 a plurality of regions representing an example tree (shown in Perttunen's FIG. 8). Each of the plurality of regions corresponds to a different element. For example, each region in Perttunen's FIG. 9 corresponds to and represents a **different node** in the tree shown in Perttunen's FIG. 8. In contrast to claim 1, Perttunen does not teach or suggest a “first region associated with a first function having **a plurality of different degrees of said first function each degree of the first function associated with a corresponding relative distance from the dividing boundary.**” Rather, in Perttunen, each region represents a **discrete** element (e.g., a discrete node in the tree). The discrete elements/nodes do not provide **differing degrees of functionality based on where in a region the user touches.** Indeed, the elements/nodes do not represent differing degrees of a single function.

Westerman does not make up for the deficiencies of Combs and Perttunen. Westerman discloses an apparatus for simultaneously tracking multiple finger and palm contacts as hands approach, touch, and slide across a proximity-sensing multi-touch surface. (Westerman, Abstract). In the system disclosed by Westerman, combinatorial optimization modules associate each contact's path with a particular fingertip, thumb, or palm of either hand on the basis of biomechanical constraints and contact features. Classification of intuitive hand configurations and motions enables integration of typing, resting, pointing, scrolling, 3D manipulation, and handwriting into a computer input device. (Westerman, Abstract).

Westerman's multi-touch surface apparatus senses the touch and motions of multiple touch devices (such as fingertips, palms, etc) on the multi-touch surface, and converts these to codes usable by other electronic devices. (Westerman, paragraphs [0041] - [0045]). In contrast to claim 1, Westerman does not teach or suggest “the first region associated with a first function having **a plurality of different degrees of said first function each degree of the first function associated with a corresponding relative distance from the dividing boundary.**” Rather, in Westerman, each code appears to be used for mapping to completely different functions and not a plurality of different degrees of one function.

Therefore, because they do not teach or suggest all of the recited claim language, Combs, Perttunen, and Westerman cannot possibly be combined to form the recited combination of claim 1. For similar reasons, the remaining independent claims and all dependent claims are not rendered obvious by the cited references. Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 103.

Claims 34-41

Claim 34 recites:

A computer readable medium including computer executable modules having computer executable instructions for providing control support to a touch pad, the modules comprising:

a detection component for detecting where touch pad input of a touch pad is received, whereby the touch pad is divided into a first region and a second region substantially about an orthogonal center line of the touch pad, **the first region associated with a first function with locations within the first region corresponding to differing degrees of the first function, the second region associated with a second function with locations within the second region corresponding to differing degrees of the second function;** and

an output component for outputting a functional result, whereby if input is received in the first region, a functional result of the first function is output by said output component in an amount corresponding to the degree associated with the location of the touch pad input, and whereby if input is received in the second region, a functional result of the second function is output by said output component in an amount corresponding to the degree associated with the location of the touch pad input.

Claim 34 is patentable over the cited references for the reasons discussed above in connection with claim 1. Claim 34 is patentable over the cited references for additional reasons as well. For example, claim 34 recites **two regions – “the first region associated with a first function with locations within the first region corresponding to differing degrees of the first function, the second region associated with a second function with locations within the second region corresponding to differing degrees of the second function.”** None of Combs, Perttunen, or Westerman teach or suggest even one region associated with a function having locations associated with differing degrees of a single function, let alone two such regions. For this additional reason claim 34 patentably defines over the cited references.

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Independent claim 38 recites similar language and likewise defines over the cited references.
Withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

CONCLUSION

The undersigned respectfully submits that pending claims are allowable and the application in condition for allowance. A Notice of Allowance is respectfully solicited.

Examiner Kumar is invited to call the undersigned in the event a telephone interview will advance prosecution of this application.

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